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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,685	08/16/2001	Yasuhiro Tanaka	P/1071-1435	3334

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EXAMINER

JONES, STEPHEN E

ART UNIT PAPER NUMBER

2817

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/931,685	TANAKA, YASUHIRO	
	Examiner	Art Unit	
	Stephen E. Jones	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-10 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claim 9 remains withdrawn by election by original presentation as detailed in paper #10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA figure 14 in view of Kubota et al (of record).

The AAPA figure 14 discloses a non-reciprocal isolator device for the transmission circuit of a portable phone (i.e. inherently includes reception and transmission circuits) that includes a central electrode assembly 240 having a ferrite 270 with central electrodes 271-273 separated by insulating sheets (i.e. "films") with a metallic case 250. Permanent magnet 260 is shown (see page 1). Electrode 276 is provided along the bottom of the ferrite 270. Figure 14 shows the connecting electrodes for 271-273 located on the sides of the ferrite 270 (i.e. directly on the "margins").

However, the AAPA figure 14 does not disclose a method including cutting an assembly from a ferrite motherboard and forming the connecting electrodes of plated conductive material or an applied paste (or other method as claimed).

The Kubota et al. reference teaches that a multilayer composite electronic component may be made by the method of starting from a laminated motherboard and slicing along the via holes to form electrodes. This method is considered equivalent to forming individual elements separately (see col. 1, lines 10-60). Note that Kubota also teaches that the via holes may be filled with metal paste (see Col. 8, lines 9-13) and also that these holes can alternatively have conductor films formed on them before cutting (see Col. 1, lines 54-57).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have manufactured the device of AIPA figure 14 by forming a motherboard laminate and then cutting into individual units having through vias filled with metal paste (or alternatively conductor films) such as taught by Kubota et al. instead of forming individual units because such a method of manufacturing would have been considered a mere substitution of art-recognized equivalent manufacturing methods that would have advantageously facilitated mass production of the devices having connecting electrodes on their sides thereby reducing manufacturing costs, as would have been well known. Also, alternatively it would have been considered obvious to one of ordinary skill in the art to have formed the conductive films (e.g. in the case where films were chosen instead of metal paste in the vias) by plating since plating is a well-known method for forming conductive films. Also, with respect to claim 6, the Kubota et al. reference shows electrodes 6 formed in the grooves of the device body 5 (see Fig. 16 as compared to Fig. 15), which suggests forming the grooves in the ferrite of AIPA figure 14 as an art-recognized alternative.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA figure 14 and Kubota et al (of record) above, and further in view of Marusawa et al. (JP 09-294006 of record).

As noted above, the combination of the AAPA figure 14 and Kubota et al (of record) shows side ports P1-P3 that do not extend to the bottom surface, which has the ground conductive pattern. However, AAPA figure 14 does not show the ground conductive pattern having gaps.

Figures 2 and 4 of the Marusawa et al. reference discloses a nonreciprocal device with gaps in the ground pattern 17 where the ports extend to the bottom of the block.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted the ports that extend to the bottom of the block with a gap in the ground electrode as taught by Marusawa et al. in the nonreciprocal device of AAPA figure 14 and Kubota because such a modification would have been considered a mere substitution of art-recognized equivalent side port electrodes with a corresponding ground pattern.

Response to Arguments

Applicant's arguments filed 10/30/03 have been fully considered but they are not persuasive.

Applicant argues that Kubota is not of the same field of endeavor and fails to teach that the structure could or should be used in a nonreciprocal device.

In response to applicant's argument that Kubota does not teach that the structure could be used in a nonreciprocal device, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Kubota teaches an electronic device/component having electrodes on the sides of the device. Similarly the admitted prior art Fig. 14 is an electronic component having electrodes on its sides thus both Kubota and the admitted prior art Fig. 14 are of the same field of endeavor (i.e. electronic components and forming electrodes on their sides).

Also, Applicant argues that there is no motivation/suggestion that the electrode assembly of the admitted prior art Fig. 14 should be laminated (i.e. it appears that applicant is arguing that there is no motivation to laminate such a device instead of forming the conductors on a solid ferrite). Applicant further requests that the examiner provide a prior art reference in support that laminating multiple electrode layers would result in a method which would advantageously facilitate mass production and reduce costs as compared to punching and wrapping.

Applicant's argument that there is no motivation/suggestion is not persuasive. The advantageous benefit is not from the well-known process of laminating alone, but is from the ability to make multiple units simultaneously (e.g. see Kubota Col. 1, lines 49-

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53) (i.e. Kubota is teaching a mass production technique for making electronic components having external electrodes on their sides). Also, the Fields et al. reference of record provides support that such laminated structures having electrodes on their sides are mass produced to make it possible to have economical manufacture of large numbers of identical components (e.g. see Fields abstract and Cols. 1-3). Furthermore, Marusawa et al. (US Patent 5,498,999) is provided as further evidence/support that laminated nonreciprocal devices provide advantages over non-laminated devices such as a high reliability device which is easily miniaturized (e.g. compare Marusawa Figs. 5 and 6, and see Col. 3, lines 14-21).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 703-308-4909. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-

0956.


BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817

SEJ